

## Fish and omega-3 fatty acid intake and risk of coronary heart disease in women.

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**CONTEXT:** Higher consumption of fish and omega-3 fatty acids has been associated with a lower risk of coronary heart disease (CHD) in men, but limited data are available regarding women.

**OBJECTIVE:** To examine the association between fish and long-chain omega-3 fatty acid consumption and risk of CHD in women.

**DESIGN, SETTING, AND PARTICIPANTS:** Dietary consumption and follow-up data from 84 688 female nurses enrolled in the Nurses' Health Study, aged 34 to 59 years and free from cardiovascular disease and cancer at baseline in 1980, were compared from validated questionnaires completed in 1980, 1984, 1986, 1990, and 1994.

**MAIN OUTCOME MEASURES:** Incident nonfatal myocardial infarction and CHD deaths.

**RESULTS:** During 16 years of follow-up, there were 1513 incident cases of CHD (484 CHD deaths and 1029 nonfatal myocardial infarctions). Compared with women who rarely ate fish (<1 per month), those with a higher intake of fish had a lower risk of CHD. After adjustment for age, smoking, and other cardiovascular risk factors, the multivariable relative risks (RRs) of CHD were 0.79 (95% confidence interval [CI], 0.64-0.97) for fish consumption 1 to 3 times per month, 0.71 (95% CI, 0.58-0.87) for once per week, 0.69 (95% CI, 0.55-0.88) for 2 to 4 times per week, and 0.66 (95% CI, 0.50-0.89) for 5 or more times per week (P for trend =.001). Similarly, women with a higher intake of omega-3 fatty acids had a lower risk of CHD, with multivariable RRs of 1.0, 0.93, 0.78, 0.68, and 0.67 (P<.001 for trend) across quintiles of intake. For fish intake and omega-3 fatty acids, the inverse association appeared to be stronger for CHD deaths (multivariate RR for fish consumption 5 times per week, 0.55 [95% CI, 0.33-0.90] for CHD deaths vs 0.73 [0.51-1.04]) than for nonfatal myocardial infarction.

**CONCLUSION:** Among women, higher consumption of fish and omega-3 fatty acids is associated with a lower risk of CHD, particularly CHD deaths.